

## REMARKS

The application was filed with twenty claims. Claims 17-20 were withdrawn from consideration as non-elected claims following a prior restriction requirement. Claims 1 and 9 are amended in this paper and claims 1-16 are now pending in the application for examination. Reexamination and reconsideration are now respectfully requested.

Fig. 4 was objected to as lacking a label indicating its depiction of "Prior Art." Fig. 1 was objected to as including a reference sign "21d". Four substitute pages of drawings, comprising Figs. 1-4, are attached to this paper for substitution in the application. These substitute drawings are believed to overcome the objections.

The specification was objected to for several informalities. These and other informalities located by applicants' attorney in his review of the specification are corrected in this paper.

Claims 1-16 were rejected under section 112 for lack of antecedent basis for the term "the assembly" in claims 1 and 9. The objectionable limitation has now been deleted from these claims, and this rejection is therefore moot.

Independent claims 1 and 9 were rejected under section 102 as being allegedly anticipated by the '898 Fukutani reference. These claims have now been amended.

Amended claim 1 includes a limitation that requires a "bearing hold member" that "includes a bearing contacting portion that bears against a counter plate at a location that is radially aligned with a thrust dynamic pressure bearing section." Support for this limitation is found, *e.g.*, in Fig. 1, in which the bearing holder 21b has a bearing contacting portion 21e that bears against a counter plate 25. The bearing contacting portion in that figure bears against the counter plate at a direction directly below, *i.e.*, at a position radially aligned with the bearing's thrust dynamic pressure section SB. This is an advantageous construction, in that by aligning the bearing contacting portion with the thrust dynamic pressure section, one can position the counter plate precisely with respect to the bearing sleeve 22 and so achieve the proper axial separation that allows the thrust bearing section to

function properly. This is achieved in a construction that is relatively simple and easy to manufacture in comparison with conventional assemblies previously known in the art. Applicants submit that this limitation distinguishes the construction of claim 1 over the art cited against it, and claim 1 is therefore believed now to be patentable. Prompt allowance of claim 1 is therefore respectfully solicited, as is the allowance of claims 2-8, which depend directly or indirectly from claim 1.

Independent claim 9 has been amended in a similar way to include a limitation identical to that described above in connection with claim 1. Independent claim 9 is thus believed now to be patentable, as are claims 10-16, each of which depends in some way from claim 9.

The application includes two independent claims – claim 1 and claim 9. Each of those claims has now been amended to distinguish it from the art cited against it. All of the pending claims – claims 1-16 – are thus now believed to be patentably distinct over the prior art, and, it is respectfully submitted therefore that the application is now in condition for allowance.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (213) 337-6711 to discuss the steps necessary for placing the application in condition for allowance.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,

HOGAN & HARTSON L.L.P.

Date: June 28, 2002

By: \_\_\_\_\_



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Version with markings to show changes made:

IN THE SPECIFICATION:

Please replace the paragraph at page 3, lines 2-7, with the following text:

Establishing the proper positional relationship between the stator assembly and the rotor assembly using the jig is very difficult and time consuming. In particular, when a motor accommodates a media disc, it is necessary to adjust the height parallelism of the disc placing face of the rotor assembly with a high [of] degree of accuracy with respect to the reference plane of the stator assembly. In addition, time needs to be allocated for the adhesive material used to solidify.

Please replace the paragraph at page 8, lines 7-16, with the following text:

On the inner circumference surface of the bearing hole of the bearing sleeve 22 is formed a dynamic pressure surface, which is positioned to face in the radial direction of dynamic pressure surface formed on the outer circumference surface of the rotating shaft 31, such that a radial dynamic pressure bearing section RB is created in a minute gap between the dynamic pressure surfaces. More specifically, the dynamic pressure surface on the bearing sleeve 22 side and the dynamic pressure surface [pressure] on the rotating shaft 31 side in the radial dynamic pressure bearing section RB face each other across a minute gap of a few [<sup>3</sup> m (micron meter)] micrometers; this minute gap forms a bearing space into which a lubricating fluid is continuously charged in the axial direction. The lubricating fluid consisting of oil or a magnetic fluid is injected into the bearing space.

Please replace the paragraph at page 8, line 27 – page 9, line 8, with the following text:

At the bottom end of the rotating shaft 31 is fixed a disk-shaped [trust] thrust plate 33. The [trust] thrust plate 33 is contained in a cylinder-shaped concave recess formed at the bottom center of the bearing sleeve 22. In the recess of the bearing sleeve 22, the dynamic pressure surface provided on the top surface of the thrust plate 33 faces in close proximity the dynamic pressure surface provided on the bearing sleeve 22. A dynamic pressure generating groove is formed on at least one of the two facing dynamic pressure surfaces, and a top thrust dynamic pressure bearing section SB is formed in the gap between the dynamic pressure surfaces of the thrust plate 33 and the bearing sleeve 22 facing each other.

Please replace the three paragraphs at page 9, line 16 – page 10, line 12, with the following text:

As described above, the two dynamic pressure surfaces of the thrust plate 33 and the dynamic pressure of the bearing sleeve 22 and of the counter plate 25 that faces them together [constitutes] constitute a set of thrust dynamic pressure bearing sections SB next to each other in the axial direction and are in each case arranged so that the opposing dynamic pressure surfaces face each other across a minute gap of a few [ $\mu$  m] micrometers; and the lubricating fluid is charged continuously into the minute gaps in the axial direction via a path provided on the outer circumference of the thrust plate 33.

Furthermore, normal herringbone-shaped or spiral shaped thrust [dynamic] dynamic pressure generating grooves in a ring shape are provided on at least one of the dynamic pressure surfaces of the

thrust plate 33 and that of the bearing sleeve 22, and on at least one of the dynamic pressure surface of the thrust plate 33 and that of the counter plate 25. As a result, when rotation takes place, the pumping action of the thrust dynamic pressure generating grooves pressurizes the lubricating fluid to generate a dynamic pressure and the rotating shaft 31 and the rotating hub 32 are supported in the thrust direction.

The rotor hub 32, which includes the rotor assembly 30 along with the rotating shaft 31, is made of a generally cup-shaped member which [inclues] includes a metal such as aluminum or aluminum alloys, so that the rotor hub 32 can [arecording] support discs such as magnetic discs (not shown). The rotor hub 32 is joined unitedly by press fitting or shrink fitting with the upper end portion of the rotor shaft 31, and therefore, a junction hole 32a is provided in the center section of the rotor hub 32. The rotor hub 32 has a generally cylindrical portion 32b for carrying recording discs in an outer circumferential portion. Recording discs are put on and mounted on the disc placing surface 32c which is stretched in a radial direction outwardly from the cylindrical portion 32b.

Please replace the paragraph at page 11, lines 11-12, with the following text:

A hard disk drive (HDD), that is, a motor having a dynamic pressure bearing apparatus is [manufacture] manufactured using the following steps.

IN THE CLAIMS:

1. (Amended) A motor having a dynamic pressure bearing apparatus comprising:  
a fixed bearing member mounted to a motor frame;  
a rotating shaft member rotatably inserted with respect to the fixed bearing member;  
a lubricating fluid injected into a gap portion between the fixed bearing member and the rotating shaft member;  
the rotating shaft member being supported by a dynamic-pressure caused by the lubricating fluid,  
wherein the motor frame is provided with a generally cylindrical bearing hold member which holds and fixes a bearing member, [the bearing hold member includes a bearing contacting portion which abuts against the fixed bearing member or one part of the assembly including the fixed bearing member in an axial direction for positioning the fixed bearing member in a normal position in an axial direction] and wherein the bearing hold member includes a bearing contacting portion that bears against a counter plate at a location that is radially aligned with a thrust dynamic pressure bearing section.

9. (Amended) A motor having a dynamic pressure bearing apparatus comprising:  
a fixed bearing member mounted to a motor frame or a bearing mounting member fixed to the motor frame;  
a rotating shaft member rotatably inserted with respect to the fixed bearing member;  
a lubricating fluid injected into a gap portion between the fixed bearing member and the rotating shaft member;  
the rotating shaft member is supported by a dynamic-pressure caused by the lubricating fluid,  
wherein the motor frame or [being] bearing mount member fixed to the motor frame is provided with a generally cylindrical bearing hold member which holds and

fixes a bearing member, [the bearing hold member includes a bearing contacting portion which abuts against the fixed bearing member or one part of the assembly including the fixed bearing member in an axial direction for positioning the fixed bearing member in a normal position in an axial direction] and wherein the bearing hold member includes a bearing contacting portion that bears against a counter plate at a location that is radially aligned with a thrust dynamic pressure bearing section.